

(c) With respect to point (c) as mentioned above, the description of the external component having a radial flange (11) secured to the engine shaft (crankshaft) is given in the specification in page 4, lines 9-15. This part of the specification makes clear that the rotor (2) has an external component which is formed by the envelope (10) and the end wall or flange (11) of the rotor (2), so that again, the representation of the crankshaft was missing in initial figure 1 to completely illustrate that this external component (10+11) with its radial flange (11) was secured to the engine shaft (crankshaft CS).

(d) Finally, concerning point (d) as mentioned above, the pulley (6) was shown in figure 1, but it was not quite clear that this pulley (6) was situated at the output of the engine shaft (crankshaft CS) and arranged between the casing (3) of the engine and the retarder (1). But this is now clearly represented in amended figure 1, wherein a cut-out made in the external component (10+11) of the rotor (2) makes it possible to see that the pulley (6) is arranged at the end of the crankshaft (CS) and between the casing (3), and more particularly its front wall (3a), and the retarder (1), and further that this pulley (6) is incorporated in flange (11) of the rotor (2), as this is described in the specification from page 3, line 38 to page 4, line 3 and in page 4, lines 25-27, and claimed in claim 9.

In so amending figure 1, we believe no matter is introduced, since everyone knows the shape of an engine crankshaft, which crankshaft CS is now partly shown in amended figure 1, in which we have also slightly moved the pulley 6 axially to bring it against the face of the flange 11 which is turned toward the front wall 3a of casing 3, this pulley 6 being arranged at the visible end portion of crankshaft CS, outside the front wall 3a, and which is extended inside the casing 3 by a hidden portion shown in phantom, thus showing that pulley 6 is incorporated in flange 11 and situated between the casing 3 and the retarder 1, according to the specification.

Therefore, in amending the specification, we believe you only will have to introduce the reference CS to designate the crankshaft, as all other members are already identified by numeral references.

Accordingly, since this application is believed to be in condition for allowance, a notice to that effect is earnestly solicited.

Respectfully submitted,  
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Version With Markings to Show Changes Made

1. (Amended) [Eddy current electromagnetic retarder (1) intended to slow the rotation of an engine shaft driven about its axis (X), particularly the crankshaft of a vehicle engine (M), this] Eddy current electromagnetic retarder (1) for reducing rotation of a crankshaft of a vehicle engine (M) driven about an axis (X), said engine having a casing (3) [which itself] wherein said casing comprises a frontal wall (3a) stretching substantially in a plane perpendicular to the axis (X) of the engine shaft, [which] said engine shaft has one end [which is] directed toward the frontal wall (3a) of the casing (3) of the engine (M) [and in the region of which], the retarder (1) [is] being mounted overhangingly on the frontal wall (3a) of the casing (3) of the engine (M) via connecting means (19), the retarder comprising a rotor part (2) which rotates [as one] coaxially with the engine shaft, a stator part (4; 4') coaxial with the engine shaft and secured to the frontal wall (3a) of the casing (3) of the engine (M), an armature [belonging] operatively attached to the rotor part (2) and an inductor [belonging] operatively attached to the stator part (4; 4'), the inductor being arranged on a stationary annular component (14, 15; 4'a, 14', 15') of the stator part (4; 4'), facing the armature, [characterized in that] wherein the rotor part (2) has symmetry of revolution about the axis of the engine shaft so that it has a peripheral face facing a peripheral face of the stator part (4; 4'), the inductor of the retarder having at least one electromagnetic winding (5; 5').

2. (Amended) The retarder as claimed in claim 1, [characterized in that] wherein the rotor part (2) has an external component of substantially cylindrical shape which surrounds the stator part (4) and which constitutes the armature of the retarder (1), said external component having a radial flange (11) secured to the engine shaft, said flange being pierced with a number of holes (13).

3. (Amended) The retarder as claimed in either of claims 1 and 2, [characterized in that] wherein the inductor of the retarder is an inductor with poles (16) each surrounded by an induction winding (5) and projecting radially outwardly on the external face of said annular component (14, 15) of the stator part (4).

4. (Amended) The retarder as claimed in claim 3, [characterized in that] wherein the poles (16) are secured to a first annulus (14)[, while] and the collection of induction windings constitutes a second annulus (15) of larger diameter than that of the first annulus (14), said second annulus (15) being assembled coaxially with said first annulus (14) by fitting each pole (16) into a respective induction winding (5).

5. (Amended) The retarder as claimed in either of claims 1 and 2, [characterized in that] wherein the inductor of the retarder (1) is an inductor with claws (14'b, 15'b) and with one single induction winding (5').

6. (Amended) The retarder as claimed in claim 5, [characterized in that] wherein a first set of claws (14'b) constitutes a first annulus (14') and a second set of claws (15'b) constitutes a second annulus (15') with the same diameter as that of the first annulus (14'), said induction winding (5') surrounding a cylindrical component (4'a) of a diameter smaller than that of the first and second annuli (14', 15'), [these] said annuli 14', 15' being assembled coaxially with said cylindrical component (4'a) in such a way that each claw (14'b) of the first set of claws is interspersed between two adjacent claws (15'b) of the second set of claws.

7. (Amended) The retarder as claimed in any of claims 1 to 6, [characterized in that] wherein the connecting means comprise a framework (19) which has at least one substantially radial flange (20) centered on the engine shaft and pierced with a number of holes (23), said flange (20) [itself] having arms (24) [which extend] extending from [it] said flange (20) toward the engine (M) to secure the framework (19) to the frontal wall (3a) of the casing (3) of the engine (M), the electromagnetic retarder (1) being housed in a space delimited by the flange (20), the fixing arms (24) and the frontal wall (3a) of the engine (3).

8. (Amended) The retarder as claimed in any of claims 1 to 7, [characterized in that] wherein a pulley (6) situated at the output of the engine shaft is arranged between the casing (3) of the engine (M) and the retarder (1).

9. (Amended) The retarder as claimed in claim 8 as associated with claim 2, [characterized in that] wherein the flange (11) of said external component (2) incorporates the pulley (6).

10. (Amended) The retarder as claimed in any of claims 1 to 9, [characterized in that] wherein said induction winding (5; 5') is energized from an electrical source, which is regulated for power, of the vehicle.